

Water Division/June 12, 2018

Subject: Central Sands Dairy, LLC (CSD)

“Bottom Line” Summary:

On April 30 through May 3, 2018, as part of an ongoing investigation, Region 5 investigated citizen concerns in Juneau County, Wisconsin regarding high nitrate levels in groundwater which has led to the contamination of private wells (above the drinking water standard of 10 mg/L for nitrate) and potentially surface water pollution. CSD is located in Juneau County and has approximately 5,000 mature dairy cows and applies manure and fertilizer to approximately 7,000 acres of crop fields. The investigation was intended to assess the potential influence of spring manure application. The Region characterized pollutant travel and groundwater flow upgradient and downgradient of CSD's production area and land application fields by collecting groundwater samples at 41 boring locations. The Region collected 82 samples which are currently being analyzed for nutrients, anions, total metals, nitrates, and nitrate isotopes. The Region also collected drinking water samples from five private wells to supplement previously collected samples. Preliminary results from private wells range from 21.9 mg/L to 40.4 mg/L for nitrate. Final results for all groundwater samples were initially expected within the next week; however, pending review of preliminary results, some sampling analysis may be redone which could delay receipt of all final sampling results.

Background - EPA Actions:

- The Region began investigating CSD because of complaints from a citizen's group known as “Friends of Central Sands”, who were concerned about CSD's farming practices. The citizen's own investigation identified private wells with nitrate levels as high as 37.8 mg/L.
- In June of 2017, the Region conducted a production area inspection and file review to determine if CSD was in compliance with its Wisconsin Pollutant Discharge Elimination System permit and Nutrient Management Plan

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- In October of 2017, the Region sampled private wells and found five wells out of the 15 sampled had results exceeding 20 mg/L of nitrate-nitrogen which is over the drinking water standard of 10 mg/L. Potential sources include land application fields and the production area of CSD.

Background - WDNR's Activities and Authority:

- Since at least 2012, Wisconsin has been aware of citizen concerns about the impacts of CSD on groundwater, and manure application practices. The Wisconsin Department of Agriculture (DATCAP) tested private wells and transmitted the results to citizens in letters stating that “... DHS recommends that all people avoid long-term consumption of water having nitrate concentrations greater than 10 mg/L.” The State has not fully investigated the contamination source.
- In 2016, in response to citizen concerns about potential groundwater impacts, Wisconsin DNR (WDNR) proposed a permit which required installation of groundwater monitoring wells at CSD's production area both upgradient of and at the manure storage basin. CSD installed the wells near the manure basins but contested the addition of upgradient wells. WDNR withdrew the proposed permit and entered a stipulated agreement with CSD which did not require the proposed upgradient monitoring wells.
- WDNR has a well compensation program but it appears to be very limited when nitrates are the contaminant.
- There has been significant coordination with state program counterparts. WDNR is aware of EPA's previous inspection at CSD and supported EPA's groundwater investigation at the program level. The State had previously tried to characterize the impacts from the facility but claims to lack authority to conduct the necessary investigation to characterize contaminants related to land application.

- EPA has shared the private drinking water well data with both WDNR and the well owners.
- The Region is unaware of any state or local actions to protect the health of persons exposed to elevated levels of nitrates from private drinking water wells in the vicinity of CSD.

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